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10/623,812	07/22/2003	Peter Flohr	003-068	5286
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CERMAK & KENEALY LLP 515 E. BRADDOCK RD SUITE B ALEXANDRIA, VA 22314			EXAMINER GRAVINI, STEPHEN MICHAEL	
			ART UNIT	PAPER NUMBER
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/623,812
Filing Date: July 22, 2003
Appellant(s): FLOHR ET AL.

MAILED
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Group 3700

Adam J. Cermak
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 15, 2005 appealing from the
Office action mailed January 24, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 6,126,439	Knöpfel et al.	10-2000
US 6,056,538	Büchner et al.	10-2000

(9) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

Claims 1-5 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Knöpfel et al. (US 6,126,439). Knöpfel is considered to disclose the claimed invention comprising:

a swirl generator **10** for a combustion-air flow and means for injecting fuel for producing a main flow;

a combustion chamber **30** arranged downstream of the swirl generator; and

a cavity **20** arranged between the swirl generator and the combustion chamber in which cavity a secondary flow can be produced, that encloses the main flow; or alternatively;

a cavity arranged between the swirl generator and the combustion chamber in which a secondary flow can be produced (please see column 4 lines 1-67). Knöpfel is also considered to disclose the claimed toroidal shape, as shown in figures **1** and **2**, injection means **17**, and mixing section arrangements (column 3 line 29).

Claim Rejections - 35 USC § 103

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knöpfel in view of Büchner et al. (US 6,056,538). Knöpfel is considered to disclose the claimed invention, as discussed above under the anticipatory rejection, except for the claimed pilot flame configuration and arrangement. Büchner, another burner for a heat generator, is considered to disclose a pilot flame configuration and arrangement at

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column 4 line 24. It would have been obvious to one skilled in the art to combine the teachings of Knöpfel with the pilot flame configuration and arrangement considered to be disclosed by Büchner for the purpose of allowing a secondary flow in burner that may be used with a main burner flow for more efficient combustion and flame stabilization.

(10) Response to Argument

Examiner acknowledges appellants' legal standards discussion and will be addressed as applied to the rejections under appeal.

anticipation

Appellants argue that the claimed invention is distinguished from primary reference Knöpfel because that reference fails to describe each of the claimed features repeated in the anticipatory rejection above.

The claimed swirl generator is considered to be expressly anticipated by the Knöpfel disclosed swirl generator **10** discussed in the abstract, shown in figure **1**, and elaborated in column 2 lines 23-41 wherein the "means for" language is construed as means-plus-function language anticipated by Knöpfel because both inject fuel for producing a main flow.

The claimed combustion chamber is considered to be expressly anticipated by the Knöpfel disclosed combustion chamber **30** shown in figure **1** and discussed in column 3 lines 25-31.

The claimed cavity arrangement is considered to be inherently anticipated by the Knöpfel disclosed mixing section **20** discussed in column 4 lines 37-67 and shown in

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figure 1, because a cavity is broadly and reasonably construed from appellants' specification page 6 lines 10-11 (i.e. and open region interior a mixing tube section) to be the same as the disclosed mixing section because both are an open region mixing tube section.

Furthermore, the claimed cavity feature in which "a secondary flow *can be produced* that encloses the main flow" (emphasis added), is considered a statement of intended use that does not patentably distinguish the claimed invention over the teachings of Knöpfel because those teachings also illustrate air flow openings **22** in figure 1 and discussed in column 4 lines 58-67 that a secondary flow can be produced that encloses the main flow since the holes surround a main flow it would result in enclosing that main flow.

Appellants also argue that Knöpfel fails to teach an annular toroidal shape. The shape is claimed as a "cavity has an annular toroidal shape." To one skilled in the art the disclosed swirl chamber **10** transitions to the entry of cavity **20** such that the entry of cavity has an annular toroidal shape as shown in figure **2** of Knöpfel. Since appellants have not given a structurally different definition of the claimed annular toroidal shape, that shape is interpreted as one skilled in the art, (i.e. as shown in the application drawings, discussed in the application specification, and in light of appellants' assignee earlier prior art in the same field of endeavor) to be a double-cone swirl shape.

Current Office practice guides examination such that claims are broadly and reasonably construed in light of the specification. Arguments asserting patentability are considered unpersuasive because the Office can not give a narrower construction of

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claims than required under current Office practice. The claimed swirl chamber, cavity, and combustion chamber are considered anticipated by Knöpfel because each of those features, independently and dependently claimed, are structurally the same with the same intended uses.

In response the appellants' scope and element arguments, it is considered that examination of claim scope and recited elements was appropriate under current Office practice.

The anticipatory rejection is considered proper and maintained.

obviousness

Appellants assert patentability because of the anticipatory rejection is overcome. Since the anticipatory rejection is considered proper, the basis for an obviousness rejection is also considered proper.

Appellants argue that the secondary reference Büchner's pilot flame does not obviate a secondary flow configured and arrangement to be used as a pilot flame. Appellants correctly identify the Büchner disclosed pilot flame from a partial stream of a fuel/gas flow. It is considered that this disclosed pilot flame is configured and arranged in use from a secondary flow since the admitted partial stream of the main flow of fuel and air is not a main flow, but rather a partial or secondary flow.

In response to impermissible hindsight, the teachings of Büchner are considered to obviate the claimed teachings anticipated by Knöpfel because the claimed secondary flow configuration and arrangement pilot flame use is for flame stabilization, a feature found in Büchner.

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The obviousness rejection is considered proper and maintained.

(11) Related Proceeding Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Stephen M. Gravini



Conferees:

Alfred Basichas 

Ehud Gartenberg 